AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Previously Presented) An extracorporeal adsorption method for removing harmful substances responsible of inducing sepsis caused by Gram-negative or Gram-positive bacteria in a mammal, said method comprising the steps of:

a) passing blood obtained from a mammal through an adsorption column assembly, adapted for fluidized bed adsorption, wherein said adsorption column assembly comprises a column and an adsorption medium in the form of particles, said particles having a density of at least 1.3 g/ml and a mean diameter in the range of 5-1000 μm, the sedimented volume of said particles being at the most 80% of the volume of the column, said particles being characterized by carrying an affinity specific molecule with a specific affinity for

i) the LPS portion of said Gram-negative bacteria and/or

ii) Gram-positive bacteria or harmful substances derived from said Gram-positive bacteria, the blood being passed at such a flow rate that a fluidised bed of the particles is formed;

b) contacting the harmful substances in the blood to the affinity specific molecules such that the affinity specific molecules bind the harmful substances;

c) retaining the harmful substances bound to the affinity specific molecules in the column while the blood passes through and exits the column.

3.-5. (Canceled)

6. (Previously Presented) The method according to claim 2, wherein the mammal is a human being.

7. (Previously Presented) The method according to claim 2, wherein the affinity specific molecule is selected from the group consisting of immunoglobulins, peptides, oligonucleotides, receptor proteins, antibiotics, and lectins.

8. (Previously Presented) The method according to claim 2, wherein two or more different affinity specific molecules are present on particles within the adsorption medium.

9. (Previously Presented) The method according to claim 6, wherein the affinity specific molecules are selected from immunoglobulins.

10. (Previously Presented) The method according to claim 2, wherein the affinity specific molecule is Polymyxin B.

11. (Previously Presented) The method according to claim 2, wherein the affinity specific molecule is selected from the group consisting of a Toll-like receptor, TLR4, binding fragments of TLR4, multimeric arrangements of TLR4, CD14, MD2, TLR2 and LBP, and any combination thereof.

12. (Previously Presented) The method according to claim 2, wherein the sedimented volume of the particles is at the most 70% of the volume of the column.

13.-14. (Canceled)

15. (Previously Presented) The method according to claim 27, wherein the flow rate of the blood through the column assembly is such that expansion ratio of the fluidised bed is at least 1.3.

16. (Previously Presented) The method according to claim 27, wherein the steps (a), (b) and (c) are preceded by a initial step by which a substance is first injected into the blood stream of the mammal.

17. (Previously Presented) The method according to claim 27, wherein the mammal is a human being.

18. (Canceled)

19. (Previously Presented) The method according to claim 27, wherein the stabilised fluidised bed is placed in line with a switch capable of being activated when a blood substance reaches a pre-set value, said blood substance is monitored by a device, said device

is placed in line with the blood circulation, said device sending the activating signal to the switch when said value is reached.

20. (Previously Presented) The method according to claim 27, wherein the affinity specific molecule is selected from the group consisting of immunoglobulins, peptides, oligonucleotides, receptor proteins, antibiotics, and lectins.

21. (Previously Presented) The method according to claim 27, wherein two or more different affinity specific molecules are present on particles within the adsorption medium.

22. (Previously Presented) The method according to claim 27, wherein the affinity specific molecules are selected from immunoglobulins.

23. (Previously Presented) The method according to claim 27, wherein the affinity specific molecule is Polymyxin B.

24. (Previously Presented) The method according to claim 27, wherein the affinity specific molecule is selected from the group consisting of a Toll-like receptor, TLR4, binding fragments of TLR4, multimeric arrangements of TLR4, CD14, MD2, TLR2 and LBP, and any combination thereof.

25. (Previously Presented) The method according to claim 27, wherein the sedimented volume of the particles is at the most 70% of the volume of the column..

26. (Previously Presented) The method according to claim 27, wherein the flow rate is such that stabilised fluidised bed of the particles is formed.

27. (Previously Presented) A method for the treatment of sepsis caused by Gram-negative or Gram-positive bacteria in a mammal by extracorporeal adsorption, said method comprising the steps of:

a) obtaining blood from said mammal,

b) passing the blood through an adsorption column assembly adapted for fluidized bed adsorption at such a flow rate that a fluidised bed of the particles is formed, wherein said adsorption column assembly comprises a column and an adsorption medium in the form of particles, said particles having a density of at least 1.3 g/ml and a mean diameter in the range of 5-1000 μm, the sedimented volume of said particles being at the most 80% of the volume of the column, said particles being characterised by carrying an affinity specific molecule with a specific affinity for

(i) the LPS portion of said Gram-negative bacteria and/or

(ii) Gram-positive bacteria or harmful substances derived from said Gram-positive bacteria

c) removing the harmful substances from the blood by binding of the harmful substances to the affinity specific molecules, thereby retaining them in the column, and then

d) reinfusing the treated blood into the same mammal.

28. (Canceled)